IN THE SPECIFICATION:

Please insert the following paragraph before the paragraph titled BACKGROUND OF THE INVENTION on page 1 of the specification:

CROSS-REFERENCE TO RELATED APPLICATIONS

Pursuant to 35 U.S.C. § 119(a), this application claims the benefit of earlier filing date and right of priority to the Korean Application No. 10-2002-57459, filed on September 19, 2002, the content of which is hereby incorporated by reference herein in its entirety.

Please insert the following paragraph before the paragraph beginning at page 1, line 13 ("A universal mobile telecommunications system ..."):

The developments in wireless mobile communications have lead users to favor using mobile phones rather than wired telephones. However, for services providing a large quantity of data, for example an amount above that generally provided by voice communications, to mobile phones through a wireless access network, the performance of mobile communication systems cannot match that of existing wired communication systems. Accordingly, technical developments for IMT-2000, a communication system allowing high capacity data communications, have been made and standardization of the technology is being actively pursued among various companies and organizations.

Please insert the following two paragraphs before the paragraph beginning at page 1, line 19 ("Figure 1 shows a network structure of a general UMTS."):

In December 1998, the ETSI of Europe, the ARIB/TTC of Japan, the T1 of the United States, and the TTA of Korea formed a Third Generation Partnership Project (3GPP). The 3GPP is creating detailed specifications for the UMTS technology. In order to achieve rapid and efficient technical development of the UMTS, five technical specification groups (TSG) have been created within the 3GPP for performing the standardization of the UMTS by considering the independent nature of the network elements and their operations.

Each TSG develops, approves, and manages the standard specification within a related region. Among these groups, the radio access network (RAN) group (TSG-RAN) develops the standards for the functions, requirements, and interface of the UMTS terrestrial radio access

network (UTRAN), which is a new radio access network for supporting W-CDMA access technology in the UMTS.

Please insert the following ten paragraphs before the paragraph at page 2, line 15 ("Figure 2 illustrates a radio protocol between the terminal and the UTRAN..."):

The core network includes a mobile switching center (MSC) and a gateway mobile switching center (GMSC) connected together for supporting a circuit switched (CS) service. The core network also includes a serving GPRS support node (SGSN) and a gateway GPRS support node connected together for supporting a packet switched (PS) service.

The services provided to a specific terminal are roughly divided into the circuit switched (CS) services and the packet switched (PS) services. For example, a general voice conversation service is a circuit switched service, while a Web browsing service via an Internet connection is classified as a packet switched (PS) service.

For supporting circuit switched services, the RNCs are connected to the MSC of the core network and the MSC is connected to the GMSC that manages the connection with other networks. For supporting packet switched services, the RNCs are connected to the SGSN and the GGSN of the core network. The SGSN supports packet communications with the RNCs and the GGSN manages the connection with other packet switched networks, such as the Internet.

Various types of interfaces exist between network components to allow the network components to transmit and receive information with each other. An interface between the RNC and the core network is defined as an Iu interface. In particular, the Iu interface between the RNCs and the core network for packet switched systems is defined as "Iu-PS" and the Iu interface between the RNCs and the core network for circuit switched systems is defined as "Iu-CS."

A radio network temporary identifier (RNTI) is used to identify a terminal while connection between the terminal and the UTRAN is maintained. Four RNTIs are defined; S-RNTI, D-RNTI, C-RNTI and U-RNTI.

The S-RNTI (Serving RNC RNTI) is assigned by an SRNC (Serving RNC) when a connection between a terminal and UTRAN is set. The S-RNTI is information by which the SRNC may identify a corresponding terminal.

The D-RNTI (Drift RNC RNTI) is assigned by a DRNC (Drift RNC) when a handover occurs between RNCs according to movement of a terminal. The D-RNTI is information by which the DRNC may identify a corresponding terminal.

The C-RNTI (Cell RNTI) is information by which a terminal may be identified in a CRNC (Controlling RNC). When a terminal enters a new cell, it is assigned a new C-RNTI value by the CRNC.

The U-RNTI (UTRAN RNTI) includes an SRNC identity and an S-RNTI. Since the SRNC and a terminal in the SRNC may be identified, it may be said that the U-RNTI provides absolute identification information.

When data is transmitted via a common transport channel, a MAC-c/sh entity adds the C-RNTI or the U-RNTI to a header of a MAC PDU which is then transmitted. A UE ID type indicator, which indicates a type of the RNTI added in the header of the MAC PDU, is also added to the header.

Please insert the following paragraph before the paragraph at page 3, line 19 ("The MAC layer provides a re-allocation service ..."):

The second layer (L2) includes a MAC layer, a radio link control (RLC) layer, a broadcast/multicast control (BMC) layer, and a packet data convergence protocol (PDCP) layer.

Please insert the following two paragraphs before the paragraph at page 5, line 23 ("The MAC-sublayer will now be described."):

The RLC layer may belong to the user plane or to the control plane depending upon the type of layer connected at the upper layer of the RLC layer. If the RLC layer receives data from the RRC layer, the RLC layer belongs to the control plane. Otherwise, the RLC layer belongs to the user plane.

As shown in Figure 2, there may be several entities in one RLC layer or one PDCP layer layer. More than one layer may be present because one terminal generally has a plurality of RBs and only one RLC entity and only one PDCP entity are used for one RB.

Please replace the paragraph beginning at page 6, line 11 with the following paragraph:

Another important function of the MAC ~~can~~ layer may be ~~a~~ logical channel multiplexing. ~~In the channel mapping, the~~ The MAC maps several logical channels to one transport channel~~,~~ to ~~thereby~~ obtain a multiplexing gain which heightens ~~an~~ the efficiency of the transport channel. Such multiplexing ~~can~~ may provide ~~a remarkably~~ much higher gain for ~~signaling information transmitting~~ data transmitted intermittently and packet data~~, so that it~~. Therefore, the multiplexing function is used for an SRB (Signaling Radio Bearer) or a packet service (PS) RAB. ~~In case of~~ Because data is continuously transmitted in a circuit service (CS) RAB, ~~because data~~

~~is continuously transmitted,~~ the multiplexing function is not used. The SRB is an RB used specifically for exchanging an RRC message or an NAS message between the terminal and the UTRAN.

Please replace the paragraph beginning at page 10, line 13 with the following paragraph:

The measurement of traffic volume is performed on the transport channel. The MAC measures the ~~amount~~ size of ~~LRC~~ the RLC buffer of every logical channel mapped to the transport channel at each TTI and adds ~~them~~ the sizes to calculate a transport channel traffic volume. ~~In this case, the~~ The traffic volume of ~~the~~ a transport channel indicates the amount of data to be transmitted by that ~~the~~ transport channel ~~is to transmit~~. The MAC reports the measurement results to the RRC and the measurement results serve as a basis for the RRC to determine whether a corresponding transport channel may sufficiently transmit the measured amount of data.

Please add the following five paragraphs before the paragraph on page 11, line 6 ("The multimedia broadcast/multicast service (MBMS) will now be described."):

When a DCH is used, the efficiency of a coded-divided channel may be problematic and there may not be enough codes for use for data transmissions having burst characteristics that result in data being crowded at a specific time during a communication session. In order to solve this problem, several scrambling codes may be used. However, the complexity of a receiver may increase without increasing the efficiency of the code-divided channel.

The DSCH is a channel shared by several users transmitting dedicated control or traffic data. Several users may share one channel by performing code multiplexing. Therefore, the DSCH may be defined as a series of code sets.

Unlike the uplink, a code shortage occurs in the downlink because the number of codes one sector may have in one base station is limited due to a spreading factor. For a high transmission rate, a low spreading factor must be used, thereby reducing the number of physical channels.

Additionally, such data services generally have burst characteristics. Therefore, if one channel is continuously allocated to one service, codes cannot be used efficiently.

In order to solve these problems, a method in which one channel is shared by a plurality of users may be employed. In order to share one channel, code multiplexing is used. Code allocation is performed for every radio frame, for example time multiplexing.

Please insert the following paragraph before the paragraph at page 11, line 7 ("The MBMS is a service for transmitting..."):

The CBS has limitations. First, the maximum length of a CBS message is limited to 1230 octet. Therefore, a CBS message is not suitable for broadcasting or multicasting multimedia data. Second, since the CBS message is broadcast to every terminal in a specific cell, multicasting for providing a service to only a specific terminal group is not possible wirelessly. For these reasons, a new service called MBMS has been proposed.

Please insert the following five paragraphs before the paragraph beginning at page 11, line 12 ("The MBMS broadcast mode is a service for transmitting..."):

1. Users receive a service announcement provided by a network. The service announcement indicates a list of services to be provided and provides related information to terminals.

2. The network sets a bearer for a corresponding broadcast service.

3. Users receive a service notification provided by the network. The service notification provides information related to broadcast data to be transmitted to terminals.

4. Users receive broadcast data from the network.

5. The network releases a bearer for a corresponding broadcast service.

Please insert the following seven paragraphs before the paragraph at page 12, line 2 ("MBMS data is transmitted from the RNC to ..."):

1. A user subscribes to a multicast subscription group. Subscription involves establishing a relationship between a service provider and a user. A multicast subscription group is a group of users that have completed the subscription procedure.

2. Users that have subscribed to the multicast subscription group receive a service announcement provided by the network. The service announcement indicates a list of services to be provided and provides related information to terminals.

3. In order for a user that has subscribed to a multicast subscription group to receive a specific multicast service, the user must join a multicast group. A multicast group is a group of users that receive the specific multicast service. Joining a multicast group involves joining the users intending to receive the specific multicast service. Joining a multicast group is also referred to as MBMS multicast activation. Through MBMS multicast activation, a user may receive specific multicast data.

4. The network sets a bearer for a corresponding multicast service.

5. A user joining the multicast group receives a service notification provided by the network. The service notification provides information regarding multicast data to be transmitted to terminals.

6. Users receive multicast data from the network.

7. The network releases a bearer for a corresponding broadcast service.

Please replace the paragraph beginning at page 19, line 18 with the following paragraph:

In the present invention, an indicator ~~indicating~~ of whether corresponding data is multicast data or dedicated data is added ~~in~~ to multicast service data and transmitted through the downlink ~~shard~~ shared channel (DSCH). The indicator is included in a header of a MAC PDU as a target channel type field (TCTF).

Please replace the paragraph beginning at page 19, line 23 with the following paragraph:

Referring ~~back~~ to the conventional downlink ~~shard~~ shared transport channel (DSCH), a field for identifying a type of a logical channel mapped to the DSCH is not included in the MAC header because ~~it transmits~~ only data of the dedicated logical channel is transmitted~~, a field for identifying a type of a logical channel mapped to the DSCH is not included in the MAC header~~. However, in order for the DSCH to provide a multicast service as well as a dedicated service, the DSCH should support a point-to-multipoint radio bearer (RB), for which ~~the~~ a common logical channel, such as CTCH or MTCH, should be mapped to DSCH.

Please replace the paragraph beginning at page 20, line 7 with the following paragraph:

As shown in Figure 6, the MAC PDU transmitted through DSCH consists of an MAC header and a~~n~~ MAC ~~PDU~~ SDU. The MAC header may include~~s~~ TCTF, UE ID type, and/or an MBMS identifier (m-RNTI) ~~or the like~~.

Please replace the paragraph beginning at page 20, line 18 with the following paragraph:

The MBMS (m-RNTI) field indicates terminal identifier information. ~~In general, in case of~~ Generally, for the point-to-point DSCH, DSCH-RNTI is used as a UE ~~IE~~ ID in the MAC header, whereas ~~in case of~~ for the point-to-multipoint DSCH, the MBMS identifier (m-RNTI) is used as the UE ID. Alternatively, instead of the MBMS identifier, an MBMS service identifier or a terminal group identifier ~~is~~ may be used as the UE ID.